Vote Solar Informal Comments following Energy Division's April 23 Public Workshop Discussion of NEM Successor Tariff

Questions on Possible Guiding Principles

Question 1, Possible Guiding Principles*: Are there any clarifying edits or additions that should be considered to the seven possible Guiding Principles provided above? Please describe how any new Guiding Principles are distinct from those already discussed.*

Answer 1

A) Comments on Possible Guiding Principles (GPs) from Energy Division:

1) *The successor tariff or contract should be consistent with, and balance, the legislative goals identified in AB 327.*

Because AB 327 goals are varied and provide key foundations for the development of the successor tariff, they should be listed as separate GPs, rather than grouped together in a footnote to GP#1. We suggest replacing this GP with our Proposed GPs #1, 2 and 3 in Section B below.

2) *The successor tariff or contract should provide market certainty and predictability, considering customer expectations and long-term benefits of distributed generation.*

We propose adding the goal of simplicity to this GP, and noting the reason that the tariff should be simple, stable and predictable: to create the conditions for continued market growth by allowing solar customers, developers and investors to reasonably predict their return on investment. We suggest revising this GP to our Proposed GP#5 in Section B below.

3) *The successor tariff or contract should encourage simple, transparent, and equitable policies for all customers.*

Given that simplicity, stability and predictability are noted in our proposed GP#5, and that our proposed GP#2 already notes the statutory requirement that costs and benefits for all customers be approximately equal, this GP is redundant and should be removed.

4) *The successor tariff or contract should promote innovation and growth among different technologies, applications, and financing structures.*

We propose modifying this GP to add references that are specific to storage and other customer-side innovations that improve grid functionality and balance supply with demand. Integration solutions are (and will be) increasingly important as renewable generation penetration increases. See our proposed GP#6 in Section B below.

5) *The successor tariff or contract should be flexible, and include processes for future review and modification.*

To ensure regulatory certainty and encourage market participation, the successor tariff should be designed to be stable and predictable over time, as noted in our proposed GP#5 and as experience with the California Solar Initiative has proven. Use of the word "flexible" here could be interpreted to run

counter to predictability. Any adjustments to the tariff should occur at infrequent, pre-designated times to avoid creating uncertainty that will chill the market. See our Proposed GP#5 in Section B below.

6) *The successor tariff or contract should be consistent with other PUC policies and goals involving distributed energy resources, including, but not limited to:*

- *Energy efficiency, zero-net-energy, energy storage, demand response, integrated demand-side management, renewable energy credits (RECs).*

We propose no change to this GP.

7) *The future tariff or contract should include customer privacy protections.*

We propose that Energy Division provide more detail regarding the meaning of customer privacy protections here. We support maintaining confidentiality regarding customer consumption patterns.

B) Our Proposed Guiding Principles and related explanation:

1) The successor tariff or contract should ensure that customer-sited renewable distributed generation continues to grow sustainably, as required by AB 327.

2) The successor tariff or contract should ensure that the total benefits and costs of the tariff to all customers are approximately equal over the life of the NEM system, as required by AB 327. Put another way, customer generators must receive fair compensation for the net benefits of their exports, including not just grid benefits but all benefits to customers.

Explanation: AB 327's Section 2827.1(b)(4) requires that " the total benefits of the standard contract or tariff to all customers… are approximately equal to the total costs." Specific categories of benefits and costs are not noted in this section, implying that all benefits and costs that accrue to IOU customers, who make up the majority of Californians, must be included. Because DG systems are long-term resource additions, analysis should quantify total costs and benefits over the expected life of the system, and avoid single-year "snapshot" analyses that fail to provide an accurate assessment of total costs and benefits. Updated analysis is needed to determine if the long-term benefits and costs of net metering to all customers will be approximately equal, assuming revised rates and including societal as well as grid benefits, under the current NEM tariff. If a properly designed, updated study finds long-term costs and benefits are approximately equal, no major policy change would be warranted at that time.

3) The successor tariff or contract should encourage growth in customer-sited renewable distributed generation among disadvantaged residential customers, as required by AB 327.

Explanation: As noted above, we propose that the Energy Division's Possible GP#1 be replaced by GP#1-3 so as to more clearly lay out key AB 327 goals.

4) The successor tariff or contract should protect customers' fundamental right to use as much or as little energy behind the meter as they choose, including reductions in their demand from the grid using renewable self-generation and other clean distributed resources. Therefore, only customer generation exported to the grid is relevant for the successor tariff.

Explanation: At the workshop, Vote Solar and others noted that nationwide, customers have a PURPA-backed right to generate their own renewable electricity to meet their own on-site energy

needs.[1] Customers' right to self-generate means they may choose to reduce the amount of power they purchase from their utility, and therefore they cannot legally be required to move to a buy all-sell all compensation structure, though the Commission could approve an option for NEM customers who choose to do so. Because customers have a right to self-generate, the Commission may only require changes to the crediting structure for the energy exported from an on-site generation system, not for the energy used to reduce on-site load.

5) The successor tariff or contract should keep compensation structures simple, stable and predictable for the foreseeable future so that solar customers, developers and investors can reasonably predict their return on investment. Times of possible adjustment should be known in advance and relatively infrequent.

Explanation: As noted above, we propose that the Energy Division's Possible GP#2 and #5 be replaced by our Proposed GP#5.

6) The successor tariff or contract should promote innovation and growth among different applications, financing structures and technologies, including storage and other customer-side innovations that improve grid functionality and balance supply with demand.

Explanation: As noted above, Proposed GP#6 is similar to Energy Division Possible GP#4 but includes reference to storage and other technologies that help to integrate renewables.

7) The successor tariff or contract should minimize customers' exposure to stranded assets. Utilities must plan for investments in the grid and properly take into account likely future growth in renewable behind-the-meter generation, storage, energy efficiency and other distributed resources. If a utility does not appropriately account for future distributed generation and other distributed resources and their associated benefits during planning processes, and the result is partially or fully stranded assets, then shareholders should bear the associated costs, not ratepayers.

Explanation: We propose this GP because distributed generation and other customer-side resources are set to play major roles in the grid of the future, and compensation structures for behind-the-meter generation must properly incent utilities to plan grid investments prudently, taking into account the likely growth of customer-side resources.

Question 2, Sustainable Growth*: The first legislative requirement for the NEM Successor Tariff—the 'sustainable growth' requirement for renewable customer generation—elicited many comments and interpretations during the workshop. What are the possible definitions and metrics the Commission could consider when implementing the following requirement?*

Public Utilities Code Section 2827.1(b)(1): "Ensure that the standard contract or tariff made available to eligible customer generators ensures that customer-sited renewable distributed generation continues to grow sustainably."

Answer 2

A definition of sustainable growth for customer-sited renewable distributed generation in the context of AB 327 implementation should include the following considerations:

[1] The relevant PURPA requirements can be found in 18 CFR §292.303.

1) Achieving the state's climate goals, essential for sustainability, will require us to move far beyond existing renewable energy mandates. In order to achieve the state's sustainability goal of 80% reductions in greenhouse gas emissions from 1990 levels by 2050, analysis shows substantial increases in customer-sited and other renewable generation are likely to be needed in excess of current goals, in addition to electrification of the majority of the transportation sector. A November 2013 study by the Lawrence Berkeley National Laboratory (LBNL)[2] found that California is on track to meet its 2020 climate goals, but does not have the policies in place to meet its 2050 goal. LBNL's analysis found that even if California follows through on some of its most ambitious policy ideas including: 1) zero net energy building mandates for commercial and residential construction by 2020 and 2030, respectively, 2) 12 GW of distributed solar power by 2020, 3) a 51% renewable portfolio standard by 2030, 4) 3.3 GW of storage and 3 million zero emission vehicles, and 5) an average 77.9 miles per gallon fuel efficiency for light duty vehicles in 2050, the state will be only about two-thirds of the way to its GHG emission reduction goal in 2050.

Maintaining the conditions for the continued strong growth of clean customer-sited distributed generation beyond Governor Brown's current 12 GW goal will be one of the state's most efficient means for keeping California leading in the transition from fossil fuels to clean energy, especially as vehicle electrification increases overall electricity demand. When crafting the NEM successor tariff, the Commission must keep squarely in mind the urgent need for continued aggressive action to reduce GHG emissions, and the unique value of rules that encourage customers to spend their private dollars to invest in a low-GHG electric grid.

2) The statute's language implies that future customer-sited installation rates should at least keep pace with today's. Public Utilities Code Section 2827.1(b)(1) requires that "…customer-sited renewable distributed generation *continues* to grow sustainably." Use of the word 'continues' here strongly implies that the Legislature considers current clean DG installation rates to be sustainable now. Therefore, a substantial slowing compared with current installation rates would be inconsistent with statute. The California IOUs have not yet been required by the Commission to make public data on the installation rates of post-incentive net metered projects. However, once that data is publicly available, the Commission should design the successor tariff to ensure that average future annual growth matches – at a minimum – the average annual megawatts of new net metered system installations in 2012 and 2013.

3) Sustainable growth means steady growth, without anticipated boom and bust cycles. The successor tariff should not send erratic signals to the market regarding expected compensation for exports; instead, to promote sustainable, steady growth, the mechanism should be simple and provide stability and certainty to market participants. Both the current net metering tariff and the California Solar Initiative have been well-designed to provide such market certainty, and the state has seen strong and steadily increasing clean DG uptake as a result.

While we believe that the Commission may choose to consider a feed-in tariff-like payment for exports from customer-owned system as a possible design for the successor tariff, the Commission should not seek to remove the ability to self-generate for one's own usage. This is not just an issue of a fundamental, PURPA-backed right to self-generate, but also due to the difficulties of establishing a

[2] "Estimating Policy-Driven Greenhouse Gas Emissions Trajectories in California: The California Greenhouse Gas Inventory Spreadsheet (GHGIS) Model," Lawrence Berkeley National Laboratory, October 2013, http://eetd.lbl.gov/publications/estimating-policy-driven-greenhouse-g .

sustainable market with administratively-set pricing. The Commission has had the opportunity to consider various types of feed-in tariffs for renewable generation in several recent proceedings (AB 920 implementation for net excess generation, AB 1969 expansion, and SB 32 implementation). In each instance, the Commission's conclusions on pricing did not lead to outcomes that would support sustainable growth across the customer-sited DG market. Additionally, feed-in tariff payments are taxable income, thereby reducing the net value of the tariff's compensation to the solar customer.

We note that net metering has been replaced with a buy all-sell all feed-in tariff only recently in two places in the country — Austin, Texas required the change in fall 2012 and Minnesota is still in the implementation process — and insufficient data is available to accurately compare the results of those policies with net metering's success.

A wholesale change from the current net metering structure -- which has supported sustainable and steady growth of customer-side renewables for many years -- to an altogether different compensation structure for exports, such as a feed-in tariff, is not warranted unless solid evidence exists that leaving the current structure in place will result in an unacceptably large shifting of costs to non-participants, taking into account societal and well as ratepayer costs and benefits. The October 2013 E3 NEM cost-benefit study comes nowhere close to providing such evidence for a host of reasons. First, rate redesign is due to be approved by the Commission in 2015, which the study itself points out will have substantial impacts on the net metering costs and benefits and will make the study's results out-of-date. Second, the study's cost of service analysis found that NEM customers of the three IOUs as a group already pay the utilities more than what it costs to serve them. In other words, E3 found that under current rate structures, solar customers as a group are already paying their fair share. In addition, our October 10, 2013 comments to Energy Division noted numerous errors in the scope, methodology, inputs and calculations used in the study that were not corrected in the final study.

Questions on Possible Program Elements

Question 1, Possible Program Elements*: Are there any clarifying edits or additions that could be considered to the list of possible Program Elements provided above? Please describe how any new Program Elements are distinct from those already discussed.*

Answer 1

We propose no clarifying edits or additions to Energy Division's table of possible program element options.

Question 2, Local Grid Adders/Interconnection Fee Exemptions: *To what extent could local grid benefits or preferred locations (discussion during the workshop touched upon the possibility of local grid adders as well as interconnection fee exemptions in certain locations) be captured and incentivized in the design of the new tariff or contract? Do we have enough information to be able to capture and value these benefits or locations, and if so, at what scale?*

Answer 2

The information needed to capture local grid benefits and preferred locations is not yet available. AB 327's Section 769 requires the IOUs to file distribution resource plans at the Commission by July 2015 that should include relevant information. It remains to be seen whether that information will be fully vetted by stakeholders and approved by the Commission before December 2015, the deadline for the Commission's approval of the NEM successor tariff. If the proceeding timelines are not compatible, we propose that these issues be considered for a future iteration of the successor tariff, or that incentives for high-locational-value DG be addressed separately from the successor tariff.

Question 3, Projects greater than 1 MW: *AB 327 allows projects greater than 1 MW that do not have a significant impact on the distribution grid to be built to the size of onsite load if the projects are subject to reasonable interconnection charges under Rule 21. What are possible definitions and metrics the Commission could consider when determining whether or not a project has a 'significant impact' on the distribution system?*

Answer 3

We do not propose definitions or metrics at this time.

Question 4, Alternatives in Disadvantaged Communities: *AB 327 requires that the Commission include specific alternatives designed for the growth of distributed generation among residential customers in disadvantaged communities. Parties noted during the workshop the importance of virtual net energy metering (VNM) to the deployment of renewable generation in multi-family affordable housing communities, as well as IREC's CleanCARE rate proposal. Are there any other considerations that the Commission could take into account in the design of alternatives (either a new tariff or contract, or variations to the Program Elements) in disadvantaged communities?*

Answer 4

Vote Solar is supportive of IREC's CleanCARE proposal as a way to help low-income ratepayers gain greater access to clean energy solutions affordably. We do not have other recommendations for implementation of this element of AB 327 at this time.

Additional Comments

Question 1, *Are there any other issues not mentioned during the April workshop (see meeting minutes here), that could be considered in the forthcoming NEM proceeding, or in the development of the NEM Alternatives Public Tool?*

Answer 1

We have the following recommendations regarding the development of the NEM Alternatives Public Tool:

A) Include a Cost of Service Analysis: The NEM Alternatives Public Tool should be capable of calculating customer-generators' cost of service under various proposals, and determining whether

customer-generators (broken down by residential and non-residential) are paying more or less than their cost of service. A cost of service analysis is a simple, meaningful way of measuring whether participating customers will be paying their fair share of costs.

The October 2013 E3 study's cost of service analysis found that NEM customers of the three IOUs as a group already pay the utilities more than what it costs to serve them, but used outdated rates to arrive at that conclusion. That analysis made it clear that because of other existing cost shifts between various groups of customers, even if there is a net cost to non-participants from a given tariff structure, participants can still be paying the utility more than what it actually costs to serve them because they were overpaying so much to begin with. This broader perspective afforded by cost of service analysis will be crucial for stakeholders, the Commission and the Legislature as we seek to assess the true impacts of net metering and other possible tariff structures.

B) Assess Costs and Benefits from Multiple Perspectives Over the Long-Term: The cost-benefit analysis conducted via the NEM Alternatives Public Tool should examine costs and benefits of the NEM 2.0 structure from multiple perspectives, including those of participants, non-participants, and society as a whole. All of these perspectives must be included in order to meet AB 327's Section 2827.1(b)(4) requirement to "ensure that the total benefits of the standard contract of tariff to all customers and the electrical system are approximately equal to the total costs." And as noted above in the section on Guiding Principles, because DG systems are long-term resource additions, analysis should quantify total costs and benefits over the expected life of the system, and avoid single-year "snapshot" analyses that fail to provide an accurate assessment of total costs and benefits.

C) Reflect AB 327's Lifting of the Ceiling on RPS Targets: AB 327's Section 399.15(b)(3) allows the Commission to require the procurement of eligible renewable resources in excess of the existing RPS targets of 20 to 33 percent. As a result, existing renewables requirements now serve as a floor, not a ceiling, and renewable generation in excess of the minimum requirements has ratepayer value because it can be used to meet the higher RPS targets that are likely to be approved by the Commission and/or the Legislature in the near future. This policy change must be factored into the RPS compliance avoided cost (benefit) assigned to NEM exports in the Public Tool.

- Submitted May 30, 2014 to Energy Division staff, Ehren Seybert (es2@cpuc.ca.gov) and Jason Perkins (jp9@cpuc.ca.gov), by Susannah Churchill, Vote Solar West Coast Regional Director